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(54) **Snackfood product**

(57) A cooked, filled snack food product has a casing of soft, raised scone dough made with not more than 10% by weight of added starch shortener, for example dried potato powder, ground semolina or cornflour, and a filling. The casing is sealed around at least a greater portion of its periphery and has a close-textured, non-crispy exterior.

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The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

The print reflects an assignment of the application under the provisions of Section 30 of the Patents Act 1977.

Snackfood Product

The present invention relates to a snackfood product.

Sandwiches, whether prepared commercially or at home, tend to be made by hand and often have raw ingredients, for example, salad vegetables and/or a dressing such as mayonnaise, which severely restrict the length of time for which sandwiches can be kept, the so-called shelf life, before they become unappetising or unfit for consumption. The presence of raw ingredients and the environment in which they are prepared render sandwiches very susceptible to contamination, particularly when they are made by hand, and there is no further processing step in their preparation which can overcome this.

It is an object of the invention to provide a snackfood product which is intended to have the same eating occasion as a sandwich but which has a longer shelf life and has a reduced risk of contamination.

Accordingly, in a first aspect, the present invention provides a cooked, filled snackfood product comprising a casing of soft, raised scone dough made with not more than 10% by weight of added starch shortener, and a filling, the casing being sealed around at least a greater portion of its periphery and having a close-textured, non-crispy exterior. The product is preferably baked but may be cooked in other ways, for example, by steaming, grilling or deep-frying.

In a second aspect, the present invention provides a half-product which comprises a casing of raw, soft scone dough made with not more than 10% by weight of

added starch shortener, and a filling, the casing being sealed around at least a greater part of its periphery, and from which a snackfood product according to the first aspect of the invention can be formed by cooking, preferably by baking.

The filling of the product or half-product may be savoury or sweet.

The basic scone-dough mixture for the casing of the product or half-product is made from flour, preferably wheat flour although other types of flour may be used, a fat such as butter, margarine or vegetable oil, a liquid such as whole milk, skimmed milks, reconstituted dried milk, or even water, a raising agent such as traditional baking powder, ammonium bicarbonate, sodium bicarbonate or magnesium bicarbonate, a moisture retention agent such as modified soya flour, guar gum, xanthan gum or carrageenan, and the added starch shortener, for example dried potato powder, ground semolina or cornflour. The wheatflour, if used, may be white, wholemeal, wholegrain or mixtures thereof.

The added starch shortener preferred for casings which are to have savoury fillings is dried potato powder, while the preferred starch shortener for casings with sweet fillings is ground semolina. The amount of dried potato powder in the dough of the casing may be in the range of from 4.9 to 6.4% by weight but is preferably about 5.62% by weight. The amount of ground semolina in the dough of the casing may be from about 7.3 to about 9.5% by weight, preferably about 8.4% by weight.

Preferably, the scone dough for the casing is seasoned or spiced, depending upon whether it is to have a

savoury filling or a sweet filling. In the case of savoury fillings, the scone dough may be seasoned with, for example, salt, pepper, pepper blends, cayenne pepper, natural or nature identical flavourings, and the like, or mixtures thereof. When there is to be a sweet filling, so-called sweet spices such as, for example, cinnamon, cloves, nutmeg, ginger and the like, or mixtures thereof may be added to the basic scone-dough mixture. For a sweet filling, the scone dough itself may be sweetened by the addition of sugar or an artificial sweetener. A flavour enhancer, for example monosodium glutamate, may be added to the dough irrespective of the sweet or savoury nature of the filling.

In preferred embodiments, the basic scone dough is made using white wheat flour, vegetable oil, whole milk, baking powder, modified soya flour (such as that known by the trade name Soy-Lec), and seasoning and dried potato powder or spice and ground semolina as appropriate.

The raw scone dough has a coarse, fluffy texture and is sufficiently firm to support the filling at the half-product stage and during baking. The scone dough is rolled out to form a layer of dough of the required thickness, preferably of between 2 mm and 6 mm thick; discrete portions of filling are placed thereon and then a second layer of scone dough of similar thickness to the first layer is laid over the filling and the first layer of scone dough. The two layers of scone dough are then sealed together around the filling to define the shape of the half-product, and hence of the product, preferably by the application of pressure. This pressure, with or without heat, may be applied to the layers of dough from above, from below or from both

directions in unison. The application of pressure may also serve to separate the individual half-products from one another. Alternatively, the products may be separated after sealing or even after cooking.

The half-products are then cooked, preferably by baking in an oven, for example a travelling oven.

The fillings may be raw or already cooked at the half-product stage. In any event, the cooking process should attain a temperature such as at least to pasteurise, preferably to flash pasteurise, the filling. This can be achieved by baking the half-product for 15 minutes to attain a core temperature of 95°C.

As mentioned above, the fillings may be sweet or savoury; the savoury fillings may include, for example, meats, vegetables, sauces or combinations thereof and sweet fillings may include, for example, pieces of fruit in a sauce, pieces of fruit in a syrup with chocolate, or a thick fruit puree. The solid parts of the fillings, whether sweet or savoury, are preferably held in a thick sauce or syrup, the sauce or syrup also acting to impart moisture to the product. With savoury fillings, large chunks of vegetables may be added raw to prevent overcooking while any meats used are preferably pre-cooked and cut into thin strips. The ratio by weight of sauce to solid in the filling is preferably in the region of 50%-60% sauce to 50%-40% solid, and more preferably 54.5% sauce to 45.5% solid. The ratio of filling to dough in the product itself may be in the range of from 55%-60% filling to 45%-40% dough by weight but is preferably 57% filling to 43% dough by weight.

Preferably, the casing as prepared and baked is sealed around its entire periphery so as securely to contain the filling and the product is cut prior to packaging. Conveniently, the snackfood product is square prior to cutting and is cut diagonally to form two triangular halves so that it can be packaged in known, readily-available sandwich packaging. Such packaging is usually transparent, with the advantage that the filling exposed at the cut edges of the two halves is visible to the purchaser at the point of sale. However, the product may be of other shapes, such as circular and hence semi-circular when cut, and may be packaged using other packaging materials.

Alternatively, the baked products may be left uncut and transported to the point of sale in bulk, without being individually wrapped.

The products will generally be sold in the ready-to-eat state but it is also possible for either the product or the half-product to be sold in a frozen state, the latter for baking by the purchaser.

Embodiments of the invention will now be described with reference to the following examples.

A preferred savoury scone-dough mixture for the casing of a product or half-product of the invention has the following proportions of ingredients:

	% by weight
White wheatflour	40.84
Vegetable oil	6.74
Baking powder	1.69
Modified Soya flour (Soy-Lec)	1.85
Milk	39.32
Flavour enhancer	1.92
Salt	1.01
Blend of peppers and spices	1.01
Dehydrated potato powder	5.62
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	100

A sweet scone-dough mixture for the casing has the following proportions of ingredients.

	% by weight
White wheatflour	38.03
Vegetable oil	6.74
Baking powder	1.69
Modified soya flour (Soy-Lec)	1.85
Milk	39.32
Flavour enhancer	1.92
Ground semolina	8.43
Sugar and mixed spices	2.02
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	100

In each case, the flavour enhancer is usually monosodium glutamate.

The proportions of ingredients for three examples of savoury fillings are set out below:

Ham Variety

% by weight

Whole filling:

Sweet cured ham	45.5
Sauce	54.5

Sauce mix:

Pepper spice blend	0.486
Double cream	26.987
Water	48.576
Salt	0.337
Black pepper	0.108
Moisture retention agent (Xanthan gum)	0.027
Vegetable oil	3.239
Modified starch (pasty gel)	4.048
Full fat soft cheese	13.494
Ham stock	1.349
Chives	1.349
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	100%

In an individual product, 55g of cooked ham and 65g of sauce give 120g of filling.

Beef Variety

% by weight

Whole filling:

Roast beef	45.5
Sauce	54.5

Sauce mix:

Pepper spice blend	0.470
Double cream	39.205
Water	47.047
Salt	1.908
Black pepper	0.105
Moisture retention agent (Xanthan gum)	0.026
Vegetable oil	3.126
Modified starch (pasty gel)	3.921
Dijon mustard	3.921
Beef bouillon	0.261
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	100%

In an individual product, 55g of cooked beef and 65g of sauce give 120g of filling.

Chicken Variety

% by weight

Whole filling:

Cooked chicken	45.5
Sauce	54.5

Sauce mix:

Pepper spice blend	0.373
Double cream	31.049
Water	41.399
Salt	0.517
Black pepper	0.083
Moisture retention agent (Xanthan gum)	0.021
Vegetable oil	1.656
Modified starch (pasty gel)	3.105
Taco sauce	1.802
Lemon juice	0.165
Thyme	0.124
Roast chicken flavour	1.035
Chicken fat	0.621
Ground ginger	0.41
Water chestnuts	18.009
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	100%

In an individual product, 55g of cooked chicken and 65g of sauce give 120g of filling.

In a preferred method of producing a product according to the invention, the scone dough, prepared from the ingredients indicated above, is rolled out in known manner, while slightly chilled, to form the layers of dough about 3 mm thick. It has been found that the dough has a suitable texture or consistency when it can be stretched by about 96% at a temperature of 16.7°C without breaking.

Discrete portions of filling, for example meat and/or vegetables in a thick, savoury or cheese sauce as indicated above, are placed at regular intervals upon a first layer of dough. A second, identical layer of dough is placed over both the filling and first layer of dough. The two layers of dough are then sealed together by compression around the discrete portions of filling to impart the desired outline shape to the individual half-products and the individual half-products are then separated perhaps simultaneously with the sealing. The half-products have an average, uncooked weight of 210g of which 120g is constituted by the filling and 90g by the dough. The filled half-products may be fast-frozen at this stage and packaged for sale.

The half-products are then baked in a travelling oven (Meinke) for a duration of 15 minutes so as to achieve a core temperature of 95°C in order to flash pasteurise the filling. The heating profile of the oven is:

STATION	TEMPERATURE (°C)	DAMPER	TOP HEAT	BOTTOM HEAT
1	229	CLOSED	3	7
2	206	CLOSED	4	6
3	226	CLOSED	4	6
4	208	OPEN	4	6
5	194	OPEN	3	7

During baking, the dough of each layer may rise from 3 mm thick to 5 mm thick and the overall thickness of the resulting baked product may be about 30 mm. The baked product has a soft, golden brown exterior which is close-textured but not crispy.

On leaving the oven, the baked, filled products are allowed to cool. They are then either packaged in bulk or cut in half diagonally to form pairs of triangular products with cut or unsealed edges where the filling is exposed. Each triangular product may have sides measuring approximately 107 mm, 120 mm and 162.5 mm respectively, so that a pair of such products can be packed in conventional, transparent sandwich packaging.

Alternatively, the cooled products, whether cut or uncut, may be frozen either in a bulk package or individually.

The snackfood product and half-product of the invention lend themselves to mechanical production, with a reduced risk of contamination, and the snackfood product itself has a shelf life of up to 7 days from the day of production, compared with a shelf life of 2 days for a sandwich.

CLAIMS

1. A cooked, filled snackfood product comprising a casing of soft, raised scone dough made with not more than 10% by weight of added starch shortener, and a filling, the casing being sealed around at least a greater portion of its periphery and having a close-textured, non-crispy exterior.

2. A half-product comprising a casing of raw, soft, scone dough made with not more than 10% by weight of added starch shortener, and a filling, the casing being sealed around at least a greater portion of its periphery.

3. A product according to Claim 1 or a half-product according to Claim 2, in which the added starch shortener comprises dried potato powder, ground semolina or cornflour.

4. A product or half-product according to Claim 3, in which the added starch shortener is dried potato powder in the range of from 4.9 to 6.4% by weight of the dough.

5. A product or half-product according to Claim 3, in which the added starch shortener is ground semolina in the range of from about 7.3 to about 9.5% by weight of the dough.

6. A method of making a snackfood half-product, including the steps of preparing a scone dough with not more than 10% by weight of added starch shortener, rolling out the dough to form two layers and laying one layer on the other with a filling therebetween, and sealing the two layers together around the filling, over at least a greater portion of their peripheries, to form a casing.

7. A method according to Claim 6, in which the casing is sealed around its entire periphery.

8. A method according to Claim 6 or Claim 7, in which, for a half-product with a savoury filling, the added starch shortener for the dough of the casing is dried potato powder.

9. A method according to Claim 8, in which the amount of dried potato powder is in the range of from 4.9 to 6.4% by weight of the dough.

10. A method according to Claim 6 or Claim 7, in which, for a half-product with a sweet filling, the added starch shortener for the dough of the casing is ground semolina.

11. A method according to Claim 10, in which the amount of ground semolina is from about 7.3 to about 9.5% by weight of the dough.

12. A method of making a snackfood product, comprising the step of cooking a half-product according to any one of Claims 6 to 11 to attain a temperature such as to pasteurise the filling and to achieve a close-textured but non-crispy exterior to the casing.

13. A method according to Claim 12, when dependent on Claim 7, in which the product is cut in half after cooking to expose the filling at the cut edges of the casing.

14. A method according to Claim 12 or Claim 13, in which the half-product is baked.

15. A method according to Claim 14, in which the half-product is baked for about fifteen minutes to attain a

core temperature of 95°C.

16. A snackfood product substantially as herein described with reference to the examples.

17. A half-product substantially as herein described with reference to the examples.

18. A method of making a snackfood half-product, substantially as herein described with reference to the examples.

19. A method of making a snackfood product, substantially as herein described with reference to the examples.

Relevant Technical Fields

(i) UK Cl (Ed.M) A2B (BMP1; BMP5; BMB3; BMB9)

(ii) Int Cl (Ed.5) A21D 13/00; A23P 1/08

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii) ONLINE: WPI

Search Examiner

K J KENNETT

Date of completion of Search

24 MAY 1994

Documents considered relevant following a search in respect of Claims :-

1-19

Categories of documents

- X: Document indicating lack of novelty or of inventive step. P: Document published on or after the declared priority date but before the filing date of the present application.
- Y: Document indicating lack of inventive step if combined with one or more other documents of the same category. E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.
- A: Document indicating technological background and/or state of the art. &: Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages		Relevant to claim(s)
Y	GB 1324421	(FORKNER) Figure 2	1, 2, 6, 12
Y	GB 1111819	(PROCTER) Whole document	1, 2, 6, 12

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).